

REMARKS

The Office Action dated January 10, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-56 are currently pending in the application, of which claims 1, 34, and 55 are independent claims. Claims 1-54 have been amended, and claims 55-56 have been amended, to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 1-54 respectfully submitted for consideration.

Claims 1, 18-20, 35-37, 40-43, and 49-53 were objected to on the basis of various alleged informalities. Claims 1, 18-20, 35-37, 40-43, and 49-53 have been amended, and it is respectfully requested that the various alleged informalities are moot in view of the amendments. Thus, it is respectfully requested that the objections to claims 1, 18-20, 35-37, 40-43, and 49-53 be withdrawn.

Claims 1-2, 4-5, 27, 34-35, 43, 49, and 51 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0139317 of Fronberg (“Fronberg”). The Office Action took the position that although such was not disclosed by Fronberg, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a checksum as a generated representative of the first set of data in the system of Fronberg so as to make the encryption/decryption key more unique by deriving the key from the checksum, citing paragraph [0048] of Fronberg. Applicants respectfully traverse this rejection.

Claim 1, upon which claims 2-33, depend is directed to a method including generating a second set of data representative of a first set of data. The method also includes encrypting the first set of data using the second set of data.

Claim 34, upon which claims 35-54, depend is directed to a system including a generating unit configured to generate a second set of data representative of a first set of data. The system also includes an encrypting unit configured to encrypt the first set of data using the second set of data.

Applicants respectfully submit that Fronberg fails to disclose or suggest (or otherwise render obvious) all of the elements of any of the presently pending claims.

Fronberg generally relates to methods for improved security of software applications. As explained at paragraph [0034] thereof, Fronberg introduces two new system calls: an encode system call, and a decode system call. The encode system call copies information (such as passwords, database entries, etc.) from the user space 210 to kernel space 220, and can encode the information in the copying process. The decode system call simply reverses the process.

As explained at paragraph [0046], in Fronberg the information can be encrypted and decrypted by a key that is unique to the process, that is to say, the program that is using the information. Paragraph [0048] of Fronberg provides a particular example of a way to derive a unique key. Fronberg suggests deriving the key from an attribute of the executing program, that is to say, the program that corresponds to the process that is using the information. In some instances, as Fronberg points out, this would mean that

the key could be unique not just to the program, but to the particular instance of the program, as the attribute could change over time. Fronberg gives, as an example, a “checksum” or “time stamp” of the program as being one of its attributes.

Claim 1 recites, “generating a second set of data representative of a first set of data; and encrypting the first set of data using the second set of data.” Fronberg fails to disclose or suggest at least these features of claim 1.

The Office Action asserted that these features are disclosed by Fronberg at paragraph [0048]. The Office Action specifically identified the “checksum” of Fronberg as corresponding to the “second data set” representative of the first data set. Applicants respectfully disagree with the Office Action’s position.

As explained above, Fronberg’s checksum is an attribute of the program, not of the information, yet Fronberg is concerned with encrypting the information, not the program. Thus, whether or not a checksum is “representative” of the program, it is not the program that is encrypted in Fronberg. Likewise, the checksum is unambiguously not representative of the information that Fronberg encrypts, such as a password or a database entry. Thus, we believe that Fronberg fails to disclose or suggest “generating a second set of data representative of a first set of data; and encrypting the first set of data using the second set of data.”

The Office Action’s argument regarding obviousness is that “it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a checksum as a generated representative of the first set of data in the system of Fronberg

so as to make the encryption/decryption key more unique by deriving the key from the checksum.” However, what can be seen from Fronberg is that Fronberg suggests a very different approach: not generating a checksum of the information to be encoded, but generating a checksum of a program that uses the information.

Because Fronberg’s approach is so different, it would not have been obvious to modify Fronberg’s approach to correspond to what is claimed. MPEP 2143.01(V) states “THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE,” (Capital letters in original.) and explains that “If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” Moreover, MPEP 2145(III) states that “the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose.” The proposed combination would render the primary reference inoperable for its intended purpose by either encoding the program instead of the information that Fronberg wants to encode (as evidenced by paragraph [0034]), or by making the encryption key unique to the information instead of the to the process as desired by Fronberg (as evidenced by paragraph [0046]). Accordingly, the proposed modification is *per se* non-obvious over Fronberg, and it is respectfully requested that this rejection be withdrawn.

Independent claim 34 has its own scope, but it recites some similar limitations to claim 1 and was rejected based on the same rationale as claim 1. Thus, the arguments

presented above should also establish the patentability of independent claim 34, and it is respectfully requested that the rejection of claim 34 be withdrawn.

Claims 2, 4-5, 27, 35, 43, 49, and 51 depend respectively from, and further limit, claims 1 and 34. Therefore, claims 2, 4-5, 27, 35, 43, 49, and 51 also recite subject matter that is neither disclosed nor suggested in Fronberg, and it is respectfully requested that the rejection of claims 2, 4-5, 27, 35, 43, 49, and 51 be withdrawn.

Claims 3, 36, 38, and 40 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of a segment of “Applied Cryptography” on the Simple XOR by Schneier (“Schneier”). The Office Action took the position that Fronberg discloses the recitations of claims 1 and 34 upon which claims 3, 36, 38, and 40 respectively depend. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claims 3, 36, 38, and 40, and, therefore, cited Schneier to remedy these deficiencies. Applicants respectfully traverse this rejection.

Claims 3, 36, 38, and 40 depend respectively from, and further limit, claims 1 and 34. At least some of the deficiencies of Fronberg with respect to claims 1 and 34 are discussed above. Schneier does not remedy those above-identified deficiencies, and, thus, the combination of Fronberg and Schneier fails to disclose or suggest all of the elements of any of the presently pending claims.

Schneier explains the operation of a simple-XOR algorithm. At page 14, Schneier indicates that many software programs use a simple-XOR algorithm, but Schneier also

indicates that “There’s no real security here. This kind of encryption is trivial to break, even without computers.” Accordingly, it is unsurprising that Schneier fails to disclose or suggest the features of claim 1 that Fronberg fails to disclose or suggest.

Furthermore, Schneier clearly teaches away from using a simple-XOR algorithm by calling it “no real security” and “trivial to break.” Thus, one of ordinary skill in the art would not be motivated to combine the teachings of Schneier’s chapter with other references based on Schneier’s disclosure, but would rather expect that doing so would provide no real security, and would result in an encryption that was trivial to break. Thus, not only does the combination of Fronberg and Schneier fail to disclose or suggest all of the elements of any of the presently pending claims, but also one of ordinary skill in the art would not find teaching, motivation, or suggestion to combine the references. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claims 6-7, 9-11, 16, 18-19, 21-24, 26, 29-30, 37, and 46 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of U.S. Patent No. 6,704,119 of Suzuki et al. (“Suzuki”). The Office Action took the position that Fronberg discloses the recitations of claims 1 and 34 upon which claims 6-7, 9-11, 16, 18-19, 21-24, 26, 29-30, 37, and 46 respectively depend. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claims 6-7, 9-11, 16, 18-19, 21-24, 26, 29-30, 37, and 46, and, therefore, cited Suzuki to remedy these deficiencies. Applicants respectfully traverse this rejection.

Claims 6-7, 9-11, 16, 18-19, 21-24, 26, 29-30, 37, and 46 depend respectively from, and further limit, claims 1 and 34. At least some of the deficiencies of Fronberg with respect to claims 1 and 34 are discussed above. Suzuki does not remedy those above-identified deficiencies, and, thus, the combination of Fronberg and Suzuki fails to disclose or suggest all of the elements of any of the presently pending claims.

Suzuki generally relates to a file system and storage medium storing program used in such system. More particularly, as can be seen from column 1, lines 15-22, Suzuki is related to a data processing system for a copying process or the like in which in which data is captured and then data is read out of the captured data. Accordingly, it is unsurprising that Suzuki fails to disclose or suggest the features of claims 1 and 34 that Fronberg fails to disclose or suggest. Thus, it is respectfully requested that the rejection be withdrawn.

Additionally, Suzuki is not related to encryption, and so it appears that the only reason that the Office Action resorted to Suzuki was based on the present application's disclosure. Such resort to references without motivation in the prior art is improper hindsight reconstruction, which the Federal Circuit has prohibited. Thus, it is respectfully requested that the rejection be withdrawn for this additional reason.

Claims 8, 12-15, 20, 25, and 39 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of Suzuki and further in view of U.S. Patent No. 6,625,734 of Marvit et al. ("Marvit"). The Office Action took the position that Fronberg discloses the recitations of claims 1 and 34 upon which claims 8, 12-15, 20, 25, and 39

respectively depend. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claims 8, 12-15, 20, 25, and 39, and, therefore, cited Suzuki and Marvit to remedy these deficiencies. Applicants respectfully traverse this rejection.

Claims 8, 12-15, 20, 25, and 39 depend respectively from, and further limit, claims 1 and 34. At least some of the deficiencies of Fronberg and Suzuki with respect to claims 1 and 34 are discussed above. Marvit does not remedy those above-identified deficiencies, and, thus, the combination of Fronberg, Suzuki, and Marvit fails to disclose or suggest all of the elements of any of the presently pending claims.

Marvit generally relates to controlling and tracking access to disseminated information. More particularly, as can be seen from column 1, line 10, to column 2, line 5, Marvit is related to tracking emails so that they can be deleted. Accordingly, it is unsurprising that Marvit fails to disclose or suggest the features of claim 1 that Fronberg and Suzuki fail to disclose or suggest. Thus, it is respectfully requested that the rejection be withdrawn.

Moreover, like Suzuki, Marvit is not related to encryption (nor to copying/printing like Suzuki), and so it appears that the only reason that the Office Action resorted to Marvit was based on the present application's disclosure. Such resort to references without motivation in the prior art is improper hindsight reconstruction, which the Federal Circuit has prohibited. Thus, it is respectfully requested that the rejection be withdrawn for this additional reason.

Claim 17 was rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of Suzuki and further in view of Schneier. The Office Action took the position that Fronberg discloses the recitation of claim 1 upon which claim 17 depends. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claim 17, and, therefore, cited Suzuki and Schneier to remedy these deficiencies. Applicants respectfully traverse this rejection.

Claim 17 depends from and further limits claim 1. The deficiencies of Fronberg, Suzuki, and Schneier with respect to claim 1 are already noted above. This combination no more discloses or suggests the features of claim 1 than either of the previous combinations, or than Fronberg standing alone, because Suzuki and Schneier do not remedy the above-identified deficiencies of Fronberg. Thus, withdrawal of the rejection is respectfully requested.

Additionally, the lack of proper motivation to combine is even more glaring in this three-way combination than in each of the two-way combinations, because the problems of both combinations are superimposed in this rejection. Thus, for this additional reason, withdrawal of the rejection is respectfully requested.

Claims 28 and 50 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of U.S. Patent No. 5,765,176 of Bloomberg (“Bloomberg”). The Office Action took the position that Fronberg discloses the recitations of claims 1 and 34 upon which claims 28 and 50 respectively depend. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claims 28

and 50, and, therefore, cited Bloomberg to remedy these deficiencies. Applicants respectfully traverse this rejection.

Claims 28 and 50 depend respectively from, and further limit, claims 1 and 34. At least some of the deficiencies of Fronberg with respect to claims 1 and 34 are discussed above. Bloomberg does not remedy those above-identified deficiencies, and, thus, the combination of Fronberg and Bloomberg fails to disclose or suggest all of the elements of any of the presently pending claims.

Bloomberg generally relates to performing document image management tasks using an iconic image having embedded encoded information. More particularly, as can be seen from column 1, lines 20-27, Bloomberg relates to a processor-based technique in the field of document image management and encoded binary information embedded in the iconic image. Accordingly, it is unsurprising that Bloomberg fails to disclose or suggest the features of claim 1 that Fronberg fails to disclose or suggest. Thus, it is respectfully requested that the rejection be withdrawn.

Moreover, like most of the other references, Bloomberg is not related to encryption, and so it appears that the only reason that the Office Action resorted to Marvit was based on the present application's disclosure. Such resort to references without motivation in the prior art is improper hindsight reconstruction, which the Federal Circuit has prohibited. Thus, it is respectfully requested that the rejection be withdrawn for this additional reason.

Claim 31 was rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of Suzuki and further in view of U.S. Patent No. 6,173,406 of Wang et al. (“Wang”). The Office Action took the position that Fronberg discloses the recitations of claim 1 upon which claim 31 depends. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claim 31, and, therefore, cited Suzuki and Wang to remedy these deficiencies. Applicants respectfully traverse this rejection.

Claim 31 depends from and further limits claim 1. At least some of the deficiencies of Fronberg and Suzuki with respect to claim 1 are discussed above. Wang does not remedy those above-identified deficiencies, and, thus, the combination of Fronberg, Suzuki, and Wang fails to disclose or suggest all of the elements of any of the presently pending claims.

Wang generally relates to authentication systems, methods, and computer program products. More particularly, as can be seen from column 1, lines 15-19, Wang relates to a presentation of audio and video information on a selected network node which is presented at a user node with assistance from a media content server. Accordingly, it is unsurprising that Wang fails to disclose or suggest the features of claim 1 that Fronberg and Suzuki fail to disclose or suggest. Thus, it is respectfully requested that the rejection of claim 31 be withdrawn.

Moreover, like most of the other references, Wang is not related to encryption, and so it appears that the only reason that the Office Action resorted to Wang was based on

the present application's disclosure. Such resort to references without motivation in the prior art is improper hindsight reconstruction, which the Federal Circuit has prohibited. Thus, it is respectfully requested that the rejection be withdrawn for this additional reason.

Claims 32-33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of Suzuki and further in view of U.S. Patent Application Publication No. 2002/0069218 of Sull et al. ("Sull"). The Office Action took the position that Fronberg discloses the recitations of claim 1 upon which claims 32-33 depends. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claims 32-33, and, therefore, cited Suzuki and Sull to remedy these deficiencies. Applicants respectfully traverse this rejection.

Claims 32-33 depend from and further limit claim 1. At least some of the deficiencies of Fronberg and Suzuki with respect to claim 1 are discussed above. Sull does not remedy those above-identified deficiencies, and, thus, the combination of Fronberg, Suzuki, and Sull fails to disclose or suggest all of the elements of any of the presently pending claims.

Sull generally relates to system and method for indexing, searching, identifying, and editing portions of electronic multimedia files. More particularly, as can be seen from paragraph [0002], Sull relates to marking multimedia files by applying or inserting tags into multimedia files for indexing and searching. Accordingly, it is unsurprising that

Sull fails to disclose or suggest the features of claim 1 that Fronberg and Suzuki fail to disclose or suggest. Thus, it is respectfully requested that the rejection be withdrawn.

Moreover, like most of the other references, Sull is not related to encryption, and so it appears that the only reason that the Office Action resorted to Sull was based on the present application's disclosure. Such resort to references without motivation in the prior art is improper hindsight reconstruction, which the Federal Circuit has prohibited. Thus, it is respectfully requested that the rejection be withdrawn for this additional reason.

Claims 41-42, 44-45, and 47 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of Schneier and further in view of Suzuki. The Office Action took the position that Fronberg discloses the recitations of claim 34 upon which claims 41-42, 44-45, and 47 depends. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claims 41-42, 44-45, and 47, and, therefore, cited Schneier and Suzuki to remedy these deficiencies. We recommend traversing this rejection.

Claims 41-42, 44-45, and 47 depend from and further limit claim 34. The deficiencies of Fronberg, Suzuki, and Schneier with respect to claim 34 are already noted above. This combination no more discloses or suggests the features of claim 34 than either of the previous combinations, or than Fronberg standing alone, because Suzuki and Schneier do not remedy the above-identified deficiencies of Fronberg. Thus, it is respectfully requested that the rejection be withdrawn.

Additionally, the lack of proper motivation to combine is even more glaring in this three-way combination than in each of the previous two-way combinations, because the problems of both combinations are superimposed in this rejection. Thus, for this additional reason, withdrawal of the rejection is respectfully requested.

Claim 48 was rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of Schneier and further in view of Marvit. The Office Action took the position that Fronberg discloses the recitation of claim 34 upon which claim 48 depends. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claim 48, and, therefore, cited Schneier and Marvit to remedy these deficiencies. Applicants respectfully traverse this rejection.

Claim 48 depends from and further limits claim 34. The deficiencies of Fronberg, Schneier, and Marvit with respect to claim 34 are already noted above. This combination no more discloses or suggests the features of claim 34 than either of the previous combinations, or than Fronberg standing alone, because Schneier and Marvit do not remedy the above-identified deficiencies of Fronberg. Thus, it is respectfully requested that the rejection be withdrawn.

Additionally, the lack of proper motivation to combine is even more glaring in this three-way combination than in each of the previous two-way combinations, because the problems of both combinations are superimposed in this rejection. Thus, for this additional reason, withdrawal of the rejection is respectfully requested.

Claims 52-54 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fronberg in view of Marvit. The Office Action took the position that Fronberg discloses the recitation of claim 34 upon which claims 52-54 depends. The Office Action recognized that Fronberg fails to disclose or suggest at least some of the further recitations of claims 52-54, and, therefore, cited Marvit to remedy these deficiencies. Applicants respectfully this rejection.

Claims 52-54 depend from and further limit claim 34. The deficiencies of Fronberg and Marvit with respect to claim 34 are already noted above. This combination no more discloses or suggests the features of claim 34 than any of the previous combinations, or than Fronberg standing alone, because Marvit does not remedy the above-identified deficiencies of Fronberg. Thus, it is respectfully requested that the rejection be withdrawn.

For the reasons explained above, it is respectfully submitted that each of claims 1-56 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-56 be allowed, and that this application be passed to issuance.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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Enclosures: Petition for Extension of Time
Additional Claim Fee Transmittal
Check No. 16451